

WHAT IS CLAIMED IS:

1. A model system for Hepatitis C virus infection in humans, comprising a non-human animal rendered immunologically tolerant to human hepatocytes and subsequently transplanted with human hepatocytes and infected with Hepatitis C virus.
2. The model system of claim 1, where the human hepatocytes are cells of the Huh7 cell line.
3. A method of preparing a host non-human animal to receive a human hepatocyte transplant, comprising:
 - (i) administering perinatally to the host animal an amount of human hepatocytes, in a form selected from the group consisting of whole cells and a cell lysate, effective in rendering the host animal immunologically tolerant to subsequent exposure to human hepatocytes; and subsequently
 - (ii) administering to the host animal an effective amount of a hepatotoxic agent, where the agent is metabolized by liver cells to produce a DNA alkylating agent.
4. The method of claim 3, where the agent is retrorsine.
5. The non-human animal of claim 3 which has further been transplanted with human hepatocytes.